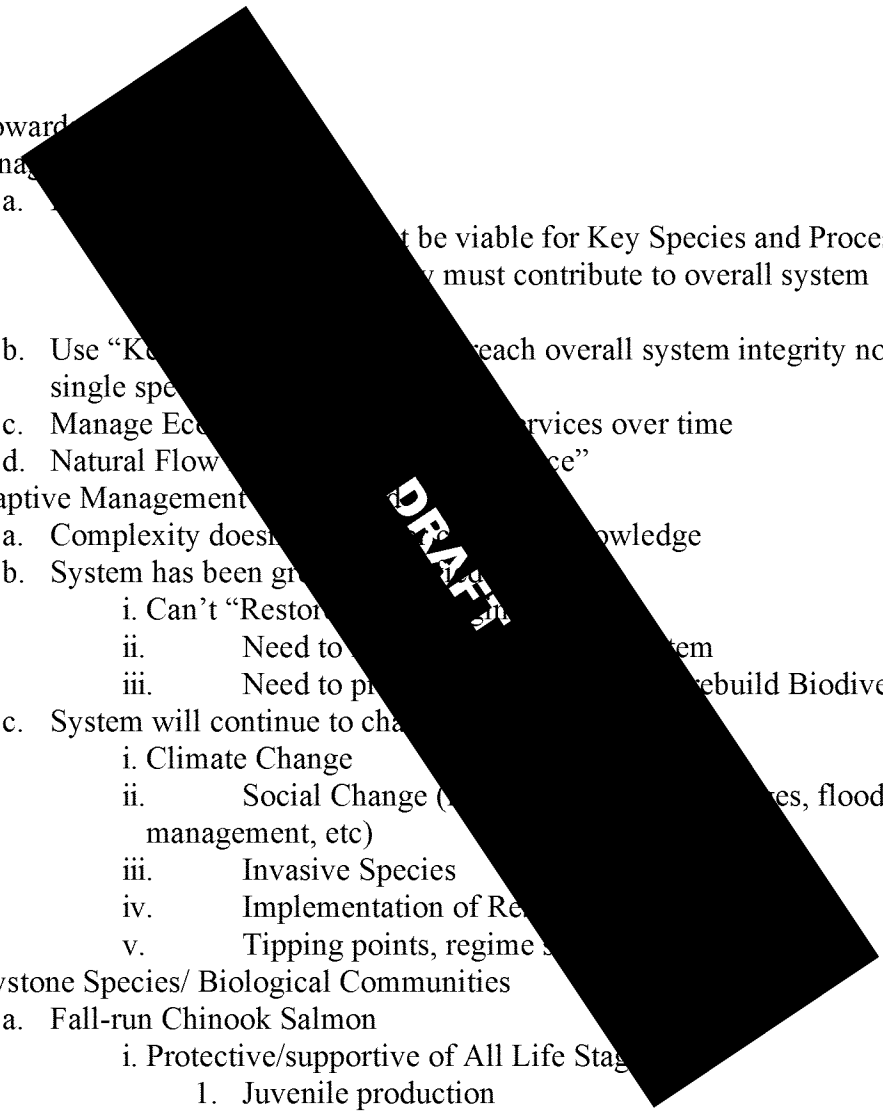


ROUGH DRAFT : for Discussion Only
Outline of Agencies Biological Goals and Objectives
San Joaquin River Tributaries

Paradigm Shift:

From “how much water do fish need” to “demonstrate how current river flow is sufficient”.

Working toward

1. Manage
 - a.  must be viable for Key Species and Processes
 - b. Use “Key Species” to reach overall system integrity not as single species
 - c. Manage Ecosystem Services over time
 - d. Natural Flow “Process”
2. Adaptive Management
 - a. Complexity does not equal knowledge
 - b. System has been greatly altered
 - i. Can’t “Restore”
 - ii. Need to rebuild system
 - iii. Need to plan to rebuild Biodiversity
 - c. System will continue to change
 - i. Climate Change
 - ii. Social Change (agriculture, flood management, etc)
 - iii. Invasive Species
 - iv. Implementation of Regulations
 - v. Tipping points, regime shifts
3. Keystone Species/ Biological Communities
 - a. Fall-run Chinook Salmon
 - i. Protective/supportive of All Life Stages
 - 1. Juvenile production
 - 2. juvenile passage to, through and out of Delta
 - 3. Adult attraction and passage
 - 4. Temperature issues
 - ii. Doubling Goal is mandated
 - 1. Based on Natural production
 - 2. Need to Define Doubling Goal for each Tributary
 - 3. Need ecological processes that can support Doubling Goal
 - b. Gravel Bars, Ripples and Runs

- c. Riparian Forests
 - d. Floodplain
 - e. South Delta Current and Future Conditions
- 4. Species of Special Concern
 - a. Steelhead
 - b. Riparian Brush Rabbit
 - c. Sacramento Splittail
 - d. Swanson Hawk
- 5. Ecosystem Functions and Services
- 6. Other Stressors
 - a. Temperature
 - b. Chemicals
 - c. Salinity
 - d. Flows (large changes in releases over short periods)
 - e. Eutrophication, etc.
 - f. Salinity intrusion coming from the SJR meeting fresher Sacramento River water in the Delta
 - g. Ecological impacts favoring non-natives
 - h. Straying

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